AMENDMENTS TO THE CLAIMS

This listing of claims will replace all versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method of determining whether an insulin resistant patient is a responder to a therapeutic treatment for insulin resistance, comprising the steps of:

Measuring the amount of HMW adiponectin and the amount of total adiponectin or LMW adiponectin in the patient's plasma or serum;

Commencing said therapeutic treatment; and

Measuring the amount of HMW adiponectin and the amount of total adiponectin or LMW adiponectin in said patient's plasma or serum one or more times after the commencement of said therapeutic treatment,

wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases after said therapeutic treatment commences.

2. (original)   The method of Claim 1, wherein said therapeutic treatment comprises the administration of an effective amount of one or more insulin sensitizing pharmaceuticals.

3. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases by at least 20% after said therapeutic treatment commences.

4. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases by at least 25% after said therapeutic treatment commences.

5. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total

adiponectin or LMW adiponectin increases by at least 30% after said therapeutic treatment commences.

6. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases by at least 40% after said therapeutic treatment commences.

7. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases by at least 50% after said therapeutic treatment commences.

8. (original) The method of Claim 2, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin or LMW adiponectin increases by at least 75% after said therapeutic treatment commences.

9. (original) The method of Claim 2, wherein said insulin sensitizing pharmaceuticals are selected from the group consisting of PPAR-gamma agonists, PPAR-gamma partial agonists, and PPAR alpha-gamma dual agonists.

10. (original) The method of Claim 2, wherein said insulin sensitizing pharmaceutical has a TZD group in its structure.

11. (original) The method of Claim 2, wherein said said insulin sensitizing pharmaceutical is selected from the group consisting of pioglitazone, rosiglitazone, MCC-555, balaglitazone, isaglitazone, netoglitazone, KRP-297 (MK-0767), farglitazar, tesaglitazar (AZ-242), and muraglitazar (BMS-298585).

12. (original) The method of Claim 2, wherein the amount of HMW adiponectin and the amount of total adiponectin or LMW adiponectin in said patient's plasma or serum is measured before the commencement of said therapeutic treatment and is measured one or more times after the commencement of said therapeutic treatment.

13. (original) The method of Claim 2, wherein the amount of HMW adiponectin and the amount of total adiponectin in said patient's plasma or serum is measured before the commencement of said therapeutic treatment and is measured one or more times after the

commencement of said therapeutic treatment, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% after the commencement of said therapeutic treatment.

14. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 25% after the commencement of said therapeutic treatment.

15. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 30% after the commencement of said therapeutic treatment.

16. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 40% after the commencement of said therapeutic treatment.

17. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 50% after the commencement of said therapeutic treatment.

18. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 75% after the commencement of said therapeutic treatment.

19. (original) The method of Claim 13, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% within four weeks after said therapeutic treatment commences.

20. (original) The method of Claim 19, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total

adiponectin in said patient's plasma or serum increases by at least 20% within two weeks after said therapeutic treatment commences.

21. (original) The method of Claim 19, wherein said patient is determined to be a responder to said therapeutic treatment if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% within one week after said therapeutic treatment commences.

22. (original) A method of predicting whether a therapeutic treatment for insulin resistance will be effective in ameliorating one or more diseases associated with insulin resistance in a patient in need of treatment for said disease or diseases, comprising the steps of:

Measuring the amount of HMW adiponectin and the amount of total adiponectin in said patient's plasma or serum;

Commencing said therapeutic treatment; and

Measuring the amount of HMW adiponectin and the amount of total adiponectin in said patient's plasma or serum one or more times after the commencement of said therapeutic treatment;

wherein said therapeutic treatment comprises the administration of an effective amount of one or more insulin sensitizing pharmaceuticals,

wherein said therapeutic treatment is predicted to be effective in ameliorating said one or more diseases in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin increases by at least 20% within four weeks after said therapeutic treatment commences.

23. (original) A method of predicting whether a therapeutic treatment for insulin resistance will be effective in ameliorating one or more diseases associated with insulin resistance in a patient in need of treatment for said disease or diseases in accordance with Claim 22, wherein said disease is selected from the group consisting of Type 2 diabetes, obesity, hypertension, and dyslipidemia.

24. (original) The method of Claim 22, wherein said method is used to predict whether a therapeutic treatment for insulin resistance will be effective in ameliorating hyperglycemia or dyslipidemia in a type 2 diabetic patient.

25. (original) The method of Claim 22, wherein said method is used to predict whether a therapeutic treatment for insulin resistance will be effective in reducing the risk that a non-diabetic patient having impaired glucose tolerance or elevated fasting plasma glucose will develop type 2 diabetes.

26. (original) The method of Claim 22, wherein said method is used to predict whether a therapeutic treatment for insulin resistance will be effective in ameliorating three or more symptoms of the metabolic syndrome as defined by Adult Treatment Panel III in JAMA, Jan 16, 2002, Vol. 287, No. 3, pp 356–359, said symptoms being selected from the group consisting of abdominal obesity, hypertriglyceridemia, low HDL, high blood pressure, and elevated fasting glucose.

27. (original) The method of Claim 22, wherein said method is used to predict whether a therapeutic treatment for insulin resistance will be effective in ameliorating three or more symptoms of the metabolic syndrome as defined by WHO.

28. (currently amended) The method of Claim 24, ~~any one of Claims 24, 25, 26, or 27,~~ wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% within four weeks after said therapeutic treatment commences.

29. (currently amended) The method of Claim 24, ~~any one of Claims 24, 25, 26, or 27,~~ wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20%, ~~25%~~ within two ~~four~~ weeks after said therapeutic treatment commences.

30. (currently amended) The method of Claim 25, ~~any one of Claims 24, 25, 26, or 27,~~ wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% ~~30%~~ within four weeks after said therapeutic treatment commences.

31. (currently amended) The method of Claim 25, ~~any one of Claims 24, 25, 26, or 27,~~ wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% ~~40%~~ within two ~~four~~ weeks after said therapeutic treatment commences.

32. (currently amended) The method of Claim 26, ~~any one of Claims 24, 25, 26, or 27,~~ wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the

amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% 50% within four weeks after said therapeutic treatment commences.

33. (currently amended) The method of Claim 26, any one of Claims 24, 25, 26, or 27, wherein said therapeutic treatment is predicted to be effective in said patient if the ratio of the amount of HMW adiponectin to the amount of total adiponectin in said patient's plasma or serum increases by at least 20% 75% within two four weeks after said therapeutic treatment commences.